

REMARKS

Claims 1-23 remain pending in the application, wherein claims 1, 9, 11 and 23 have been amended. No claims were added or cancelled by this amendment.

As discussed in the application, the suture pulley assembly according to the present invention is adapted to equalize forces on both sides of a looped suture so that the tensile load applied to the looped suture will be equalized on both sides of the looped suture. Each side of the looped suture is, in turn, attached to a respective side of a looped tissue graft strand attached within a bone tunnel during joint repair surgery. If the tensile load on each side of the looped suture is not properly equalized, a greater load may be applied to one side of the looped tissue graft strand than the other, thereby resulting in unequal loads being borne by each side of the tissue graft strand. Applying unequal loads may seriously compromise the integrity of the graft, as one side will bear more load than the other side, thus potentially causing premature stretching or tearing of the side that bears the greater load. Thus, providing a rotatable suture wheel that is able to rotate and thereby equalize the tensile load on both sides of a looped suture is an advancement over the art and is neither taught nor suggested in any of the applied references. This alone demonstrates the advantages of the claimed suture pulley assembly as compared to the cited art.

Another aspect of the claimed suture pulley assembly is its ability to accommodate looped sutures of varying cross-sectional width. For example, if a looped suture has a knot tied therein, the ability of the first and second pulley plates to move apart in response to the greater width of the knot permits more uniform and reliable rotation of the looped suture through the pulley wheel during force equalization. No such structure and functionality is taught or suggested in the cited art.

The Office Action rejects claims 1-9 and 11-23 under 35 U.S.C. § 102(b) as being anticipated by Goble et al. (US 5,713,897). The Office Action also rejects claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Goble et al. in view of Lewis et al. (US 4,950,271). In making the foregoing rejections, it is alleged that Goble et al. discloses a suture pulley assembly, namely the structure designated by reference number 80. It is further stated that this alleged "suture pulley assembly" comprises a pulley wheel comprising first and second pulley plates (reference numbers 93 and 94) sized and positioned so as to define a pulley space therebetween. In response, Applicants maintain that the structure in Goble et al. corresponding

to reference number 80 is neither a suture pulley assembly nor are items 93 and 94 pulley plates of a rotatable pulley wheel.

In contrast to what is alleged in the Office Action, Goble et al. teaches that item 80 is a "measuring device" for measuring knee displacement. Goble et al. further teaches that flat front and rear disks 93 and 94 "are secured and parallel to outer surfaces of the top and bottom braces 86a and 86b to span therebetween". Col. 8, lines 58-61 (emphasis added). Because front and rear disks 93 and 94 are "secured" to top and bottom braces 86a and 86b, they are clearly not rotatable and do not define a rotatable wheel that is able to rotate in response to unequal loads applied to respective ends of a looped suture in order to thereby equalize the load on each side of a looped suture. Moreover, as more clearly shown in Figure 7 of Gobel et al., front disk 93 is a displacement gauge that includes radial marking 96 and which therefore must remain stationary in order to correctly register displacement indicated by rotatable pointer end 99. In view of the foregoing, Applicants submit that front and rear disks 93 and 94 are not able to rotate relative to top and bottom braces 86a and 86b as a pulley wheel. As such, even if one could loop a suture within the space defined between disks 93 and 94 of the Goble et al. device, the inability of disks 93 and 94 to rotate would inhibit or prevent equalization of the load on both sides of the looped suture. More fundamentally, because disks 93 and 94 cannot rotate relative to the structures they are attached, they do not comprise first and second pulley plates of a pulley wheel as alleged in the Office Action.

In addition, front and rear disks 93 and 94 of Goble et al. do not define a pulley space therebetween into which a looped suture strand can be inserted. Whatever space exists between plates 93 and 94 extends only partially around the area between them. Top and bottom braces 86a and 86b, to which front and rear disks 93 and 94 are secured, as well as pinion gear 97 and rod 89, fill a substantial portion of the space between plates 93 and 94, thereby blocking this space and effectively preventing a suture from being looped within the space between plates 93 and 94.

Finally, the claims as amended require first and second pulley plates to define a pulley space that can "selectively increase or decrease in cross-sectional width in response to insertion of differently sized sutures into said pulley space". Because plates 93 and 94 are "secured" to top and bottom braces 86a and 86b, they remain in a fixed orientation with a predefined space therebetween that cannot change in response to differently sized sutures. See Goble et al., col. 8, lines 58-61. They cannot move toward or away from each other in order to define differently

sized pulley spaces therebetween. The alleged biasing means (reference number 100) does not cooperate with plates 93 and 94 so as to allow them to move toward or away from each other. Instead, spring 100 is used to bias an entirely different item, namely the pinion gear 97. As described in Goble et al., "[t]he coil spring 100 is to be stretched along track 101 when the pinion gear 97 is turned, as shown in FIG. 8, and will return to a relaxed state, as shown in FIG. 7, when the threaded end 90 of straight rod 89 is turned out of a patient's patella 102, as illustrated in FIG. 8." Col. 9, lines 16-22.

For any of the foregoing reasons, the claims as amended are neither anticipated by nor obvious over Goble et al., either alone or in combination with any other art of record. As such, Applicants submit that the application is in allowable condition.

In the event that the Examiner finds remaining impediment to a prompt allowance of this application that may be clarified through a telephone interview, the Examiner is requested to contact the undersigned attorney.

Dated this 8th day of September 2006.

Respectfully submitted,



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